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CLAIMS

1. Method for soldering an object comprising several soldered joints, which method comprises the steps of:

- 5 - mechanically soldering of at least some of the soldered joints;
- visually assessing the soldered joints; and
- correctively soldering the visually assessed soldered joints that do not meet the relevant quality requirements,
- 10 characterized in that said visual assessment takes place by means of a video camera and a computing device connected to the video camera, in which computing device the assessment criteria for the soldered joints are stored.

2. Method according to claim 1, characterized in that

15 said corrective soldering of the soldered joints that do not meet the requirements takes place automatically under the control of the computing device.

3. Method according to claim 1 or 2, characterized in that said corrective soldering of the soldered joints is

20 carried out with the same soldering means as said mechanical soldering.

4. Method according to claim 3, characterized in that said soldering is carried out in an apparatus that forms the subject matter of Dutch patent application No. 1017843.

25 5. Method according to any one of the preceding claims, characterized in that said transport takes place by means of a robot.

6. Method according to any one of the preceding claims, characterized in that said apparatus is suitable for

30 soldering printed circuit boards.

7. Apparatus for soldering objects comprising several soldered joints, which apparatus comprises:

- a conveyor for supplying the objects to be soldered and discharging the soldered objects;

- a soldering device for soldering the objects to be soldered,

5 characterized by a video camera for recording at least one image of at least some of the soldered joints made by the soldering device;

 a computing device connected to the video camera for receiving from the video camera signals representing images
10 recorded by the video camera, said computing device being arranged for comparing said signals with signals that are representative of correct soldered joints.

8. Apparatus according to claim 7, characterized by a corrective soldering device for the corrective soldering of
15 soldered joints that have been found not to meet the criteria that are stored in the computing device.

9. Apparatus according to claim 7 or 8, characterized in that said corrective soldering device is arranged for the corrective soldering of only those soldered joints that have
20 been found not to meet the relevant criteria.

10. Apparatus according to claim 7, 8 or 9, characterized in that said corrective soldering device is made up of the soldering device as described in the Dutch patent 1 017 843.

25 11. Apparatus according to any one of the claims 7 - 10, characterized in that the apparatus comprises a handling device for carrying out the following operations under the control of the computing device:

- moving the objects to be soldered from the conveyor to
30 the soldering device;

- moving the soldered objects from the soldering device to a position within the recording area of the video camera;

- moving the soldered objects from the recording area of the video camera to the conveyor; and

- moving the soldered objects from the video camera to the corrective soldering device, and vice versa, if the
5 recorded image gives cause for this.

12. Apparatus according to claim 11, characterized in that said handling device is made up of a robot, which is controlled by the computing device.

13. Apparatus according to any one of the claims 7 - 12,
10 characterized in that the apparatus is suitable for handling printed circuit boards.

14. Apparatus according to any one of the claims 7 - 13, characterized in that said corrective soldering device is arranged for soldering only a single soldered joint or a
15 single group of soldered joints under the control of the computing device.

15. Apparatus according to claim 14, characterized in that said corrective soldering device is a soldering device as described in Dutch patent application No. 1017843.

20 16. Apparatus according to claim 15, characterized in that said handling device is suitable for exchanging masking plates under the control of the computing device.